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Merging of the BT1 and BT2 gear categories in the North Sea (STECF-16-02)

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Abstract

The STECF provided advice in relation to possible merging of the BT1 and BT2 gear categories in the North Sea by written procedure in February 2016. The Commission may consult the STECF on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines.

TABLE OF CONTENTS

SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

Merging of the BT1 and BT2 gear categories in the North Sea (STECF-16-02)

THIS REPORT WAS ISSUED BY WRITTEN PROCEDURE IN FEBRUARY 2016

Background

In accordance with Annex I of Council Regulation (EC) No 1342/2008 (the cod plan), the maximum allowable fishing effort defined by a particular gear grouping and area is set for each Member State. These effort groups should be established on the basis of principles set out in Article 31, including homogeneity, effects of the fishing activities associated to the effort group and cost effectiveness with respect to the biological stocks captured.

Following the merge of gear groupings TRI and TR2, several Member States have asked the Commission to ensure a merge of gear groupings BT 1 and BT2. These Members States consider that the current correction coefficient which is applied to transfers from BT2 to BTl discourages fisherman from fishing more selectively (e.g. use larger mesh size) which would be required in the light of the landing obligation. These Member States wish to allow fishing effort transfers from BT2 to BT11 effort groups on a 1:1 basis. This would effectively amalgamate these into one large gear grouping. According to Article 31 of the Regulation the Commission, based on the advice of STECF, the Commission can amend Annex I of Council Regulation (EC) No 1342/2008 and if appropriate merge the BTl and BT2 gear groupings.

Request to the STECF

In this context the Commission requests STECF to:

- Comment on whether the current transfer rates between the BT2 and BTl effort groups have an impact on the effective implementation of the landing obligation by dis-incentivising fishermen to use more selective gears.
- Analyse whether such a merger in the spirit of the principles set out in the Article 31 of the cod plan.
- Recalculate the correction coefficients for transfers between gear groupings based on Art. 17 of the Cod Recovery Plan (see STECF 15-12 FDI 2015).

STECF Response

STECF PLEN 15-02 has previously commented on the merging of TR1 and TR2 effort groups in the North Sea. Many of the issues raised previously are also applicable to the potential merging of the BT1 and BT2 gear groups.

Transfer rates are based on the rationale that, historically, cod CPUE has been, in the case of the North Sea and area 2EU, on average around ~11 times higher in the BT1 gear group than in the BT2 gear group (2012-2014; the transfer rate being 0.093, STECF 15-12). This difference in cod CPUE is not only caused by the mesh size, but also by other characteristics of the gears, and, to a great extent by targeting behaviour and depending on the area and season in which the fisheries operate. For example, historically, the BT1 gear group in the North Sea has been typically deployed in a targeted plaice fishery catching cod as a bycatch, while the BT2 gear group has typically been deployed in a targeted sole fishery in the southern North Sea (ICES IVc).

The rationale behind the transfer rates is to prevent any potential increase in cod fishing mortality when member states wish to transfer effort from a low-cod-CPUE fishery (e.g. BT2) to a high-cod-CPUE fishery (BT1). Currently, any transfer of effort from BT2 to BT1 in the North Sea, incurs a substantial effort penalty, as the transfer rule assumes that the BT2 effort will be deployed in such a way that it would result in about an eleven fold increase in CPUE of cod. It is noted that effort by the BT2 is almost ten times that of the BT1. Given this, and the higher cod CPUE in the BT1 metier, any substantive swap in effort without applying a transfer penalty has the potential to substantially increase the volume of cod catches in the BT1 and thus North Sea cod stock fishing mortality assuming that fishing patterns remain unchanged.

CPUE's are based on averages derived across a range of fisheries within each gear group. In practice and in the absence of effort penalties, the realised change in cod mortality may be different than anticipated, depending on which fishery the effort is being deployed in. STECF PLEN 11-03 noted that within a single gear group (TR1) there is variation in cod CPUE and that this variability increases substantially when comparisons are made between Member States and across areas. For the years 2012-2104, the BT1 gear group accounts between 3-5% of the overall cod catch whilst the BT2 gear group accounts for between 2-4% of the overall cod catch (STECF 15-12).

It could be argued that, if BT2 fishing operators, while continuing to carry out a typical sole fishery and avoiding cod bycatch, increased their mesh size in order to achieve higher selectivity (i.e. reduce catches of plaice and other species), then their cod CPUE would not increase twelve-fold, and therefore such a transfer rate would not be representative of the change in catchability for cod. On the other hand, if BT2 fishing operators are actually shifting away from a typical sole fishery towards a more plaice-oriented, cod-bycatching fishery, their cod CPUE may increase twelve fold (because they effectively become typical of BT1 fishers), and therefore the transfer rate may be appropriate in such a case. The two cases described here represent two extremes, whereas the actual result when current BT2 fishers increase their mesh size may lie somewhere between the two. In the case of a merger, it might be advisable to establish an alternative criterion to distinguish between high and low cod CPUE fisheries. This criterion could be a spatial one, separating areas of higher and lower cod CPUE. However, it should be kept in mind that the spatial distribution of cod is dynamic and that cod abundance in areas where it is currently low may increase in the future, e.g. when the stock further recovers (already in PLEN-09-01, in its first evaluation of Article 11 of the cod plan, STECF referred to this possibility as 'depletion decoupling'). It is also not evident whether a spatial criterion on its own would be sufficient to effectively separate fisheries that have high and low cod catchabilities; skipper knowledge and targeting behaviour may play a role as well. At present, STECF is not in the position to predict what the cod CPUE would be of a sole-targeting cod-avoiding fishery with mesh >= 100 mm.

Alternatively, if the BT1 and BT2 segments were to be merged, it would be precautionary to apply the transfer rate while doing so: for the North Sea and 2EU, for example, the BT2 kWdays could be reduced twelve-fold when merging them with the BT1 kWdays.

ToR 1:

Comment on whether the current transfer rates between the BT1 and BT2 effort groups have an impact on the effective implementation of the landing obligation by dis-incentivising fishermen to use more selective gears?

Taking into account the above considerations, the current transfer rates may dis-incentivise fishermen deploying BT2 gear to use mesh sizes above 120 mm to reduce unwanted catches due to the effort penalty that would be incurred by the Member State. However, the use of mesh sizes below 120 mm may also reduce the amounts of discards considerably and in addition other measures for improving selectivity in the BT2 fleet are available. For sole fishermen with low reliance on gadoid bycatch, no dis-incentive exists regarding alternative selective solutions (e.g. large mesh panels).

In cases where a variety of fish species comprise an important bycatch, finding alternative selective solutions may be more challenging. It is noted that it is not possible to predict whether the current transfer rates will have an impact on the effective implementation of the landing obligation, as the fundamental requirement of the landing obligation is to land all catches. Effective implementation of such a provision is therefore entirely a control issue.

We might also note that any additional management measures such as specifying cod-avoidance gears or spatial measures is likely to result in an increased management burden, but the effects in terms of cost effectiveness cannot be determined.

ToR 2:

Is such a merger in the spirit of the principles set out in the Article 31 of the cod plan?

While STECF has no objective means to assess whether such a merger is in the spirit of Article 31 of the cod plan, STECF makes the following observations. A merged BT segment consisting of, e.g., sole-targeting cod-avoiding fishers as well as whitefish-targeting fishers is not likely to satisfy the requirement of Article 31(a) of being homogeneous with respect to the biological stocks captured, since the fisheries involved could well differ by up to an order of magnitude with regards to their cod CPUE and such a merger would result in an even more heterogeneous gear group.

The merger is also unlikely to satisfy the requirement of Article 31(b) of being cost-efficient in terms of management burden relative to conservation needs. While STECF cannot assess whether necessary additional measures would be cost-efficient, STECF notes that any increase in fishing mortality on cod can only be avoided if either (i) the transfer rate would be applied before merging such that the current BT2 kWdays are reduced by a transfer rates penalty, or (ii) cod avoiding (e.g. sole targeting) activity can be distinguished from fisheries with higher cod bycatches based on some other agreed criterion than mesh size and be subject to different additional rules, which may increase the management burden. Such additional rules could involve spatial criteria (e.g. based on the identifiable cod distribution) or prescriptions of the use of cod-avoidance gears. In conclusion, the merger is not in the spirit of the principles set out in Article 31 of the cod plan.

However, given that cumulatively, BT1 and BT2 gears account for only 5% of the overall cod catch in the North Sea the potential impacts on cod mortality of such a merger will be much less than the merger of TR1 and TR2 gears as reported by STECF PLEN 15-02.

ToR 3 Recalculate the correction coefficients for transfers between gear groupings based on

Art. 17 of the Cod Recovery Plan (see STECF 15-12 FDI 2015).

As noted above STECF considers that in order to limit any potential increase in cod mortality that may be associated with increased effort in the BT1 gear group, transfer rates should be associated with some form of

transfer penalty. However, STECF has no basis to estimate what that penalty would be in practice, but notes that a penalty factor of ~12 reduction in KwDays available to the BT2 fleet would be precautionary. In the absence of any criteria to base a transfer penalty, Table 2 below provides the transfer rates between gears and the newly merged BT1+BT2 group, which are based on the aggregate BT1 and BT2 catch and effort (CPUE) data.

Table 1. Original transfer ratios from STECF PLEN 15-02 Corrigendum

	BT1	BT2	GN1	GT1	LL1	TR2+ TR1	TR3	2012-2014 CPUE	2012-2014 LPUE
BT1		1	0.382	1	1	0.415	1	317	272
BT2	0.093		0.035	0.189	0.129	0.038	1	29	25
GN1	1	1		1	1	1	1	830	803
GT1	0.489	1	0.187		0.681	0.203	1	155	149
LL1	0.719	1	0.275	1		0.299	1	228	228
TR2+TR1	1	1	0.919	1	1		1	763	578
TR3	0.035	0.375	0.013	0.071	0.048	0.014		11	11

Table 1. Original transfer ratios from STECF PLEN 15-02 Corrigendum with newly merged BT1 and BT2 gear groups

	BT1+ BT2	GN1	GT1	LL1	TR2+ TR1	TR3	2012-2014 CPUE	2012-2014 LPUE
BT1+BT2		0.07	0.374	0.255	0.076	1	58	49
GN1	1		1	1	1	1	830	803
GT1	1	0.187		0.681	0.203	1	155	149
LL1	1	0.275	1		0.299	1	228	228
TR2+TR1	1	0.919	1	1		1	763	578
TR3	0.19	0.013	0.071	0.048	0.014		11	11

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1 - Information on STECF members and invited experts' affiliations is displayed for information only. In some instances the details given below for STECF members may differ from that provided in Commission COMMISSION DECISION of 27 October 2010 on the appointment of members of the STECF (2010/C 292/04) as some members' employment details may have changed or have been subject to organisational changes in their main place of employment. In any case, as outlined in Article 13 of the Commission Decision (2005/629/EU and 2010/74/EU) on STECF, Members of the STECF, invited experts, and JRC experts shall act independently of Member States or stakeholders. In the context of the STECF work, the committee members and other experts do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members and invited experts make declarations of commitment (yearly for STECF members) to act independently in the public interest of the European Union. STECF members and experts also declare at each meeting of the STECF and of its Expert Working Groups any specific interest which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: http://stecf.jrc.ec.europa.eu/adm-declarations

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